TUTORIAL

WHO ELSE WANTS TO LEARN DATA STRUCTURES

And algorithms? - A full Guide

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Day -∞ to 0:

Stick to a programming language like C or C++. Make sure that you are comfortable with pointers/objects.

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Day 1:

Understand the concept of Algorithmic complexity. Skip the theory for now, but for every piece of code you write, you should be able to derive both time and space complexity.

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Day 2 - 10:

Let's start with some simple data structures,

1. Arrays
2. Linked
3. Lists
4. Strings
5. Stacks
6. Queues

Understand their basic operations and code them all.

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Day 11 - 25:

Let's now learn some simple algorithms,

1. Sorting - Insertion sort, Merge sort, Quick sort, Heap sort, Bucket sort, Counting sort, Radix sort, External sorting
2. Search - Linear search, Binary Search (along with its variants).
3. Prime Numbers - Sieve of Eratosthenes, Primality test
4. Strings - String searching, LCS, Palindrome detection

Day 26 - 50:

Once you are comfortable with everything above, start doing problems from,

1. Cracking the Coding Interview
2. Elements of Programming Interviews
3. Programming Interviews Exposed: Secrets to Landing Your Next Job
4. GeeksforGeeks
5. HackerRank
6. InterviewBit

Stick to chapters of arrays, linked lists, strings, stacks, queues and complexity.

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Day 51 - 60:

Let's learn some non-linear data structures,

1. Tree
2. Hash table
3. Graph

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Day 61- 90:

Refer to the previous resources and start doing problems from trees, hash tables, heaps and graphs.

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Day 101 - ∞ :

You are now better than most of the CS undergrads. Keep revising the above topics and start competitive programming!

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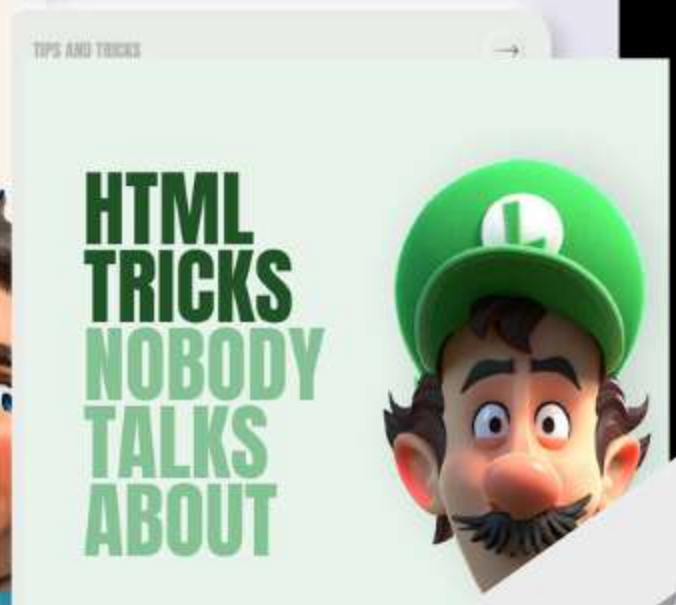
Check out more 👀



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